

What is claimed is:

1. A method for controlling the temperature of a baking oven containing a catalyst and having a control unit, an oven chamber temperature sensor, and a catalyst temperature sensor; the electrical sensor signals of the oven chamber temperature sensor and the catalyst temperature sensor being processed in an evaluation circuit of the control unit in such a manner that when a control state which is dependent on the electrical sensor signals is reached, the control unit generates at least one electrical control signal that influences a heating source, in particular an electrical heating element, of the baking oven in a predetermined manner; the processing being carried out in the evaluation circuit of the control unit as a function of the temperature difference between the oven chamber temperature and the catalyst temperature, and depending on whether the catalyst temperature is higher or lower than the oven chamber temperature, wherein a first electrical control signal is generated based on a first control state; the first control state being reached when the catalyst temperature is higher than the oven chamber temperature, and the temperature difference between the catalyst temperature and the oven chamber temperature is greater than or equal to a first threshold value (c), and the first electrical control signal acts on the heating source in such a manner that the oven chamber temperature is maintained substantially constant or drops to or below a further threshold value.
2. The method as recited in Claim 1, wherein a second electrical control signal is generated based on a second control state; the second control state being reached when the catalyst temperature is higher than the oven chamber temperature, and the temperature difference between the catalyst temperature and the oven chamber temperature is initially greater than the first threshold value (c), and, at a later time, is smaller than a second threshold value (d).
3. The method as recited in Claim 2, wherein the second electrical control signal acts on the heating source in such a manner that the oven chamber temperature is increased or maintained substantially constant at a first predefined value for a first predetermined period of time.

4. The method as recited in at least one of the Claims 1 through 3, wherein a third electrical control signal is generated based on a third control state; the third control state being reached when the catalyst temperature is higher than the oven chamber temperature, and the temperature difference between the catalyst temperature and the oven chamber temperature is greater than or equal to a third threshold value (e).
5. The method as recited in Claim 4, wherein the third electrical control signal acts on the heating source in such a manner that the oven chamber temperature falls to or below a fourth threshold value (f).
6. The method as recited in Claim 5, wherein a fourth electrical control signal is generated based on a fourth control state; the fourth control state being reached when the catalyst temperature is higher than the oven chamber temperature, the temperature difference between the catalyst temperature and the oven chamber temperature is initially greater than or equal to the third threshold value (e), and, at a later time, the oven chamber temperature is at the fourth threshold value (f).
7. The method as recited in Claim 6, wherein the fourth electrical control signal acts on the heating source in such a manner that the oven chamber temperature is maintained substantially constant at the fourth threshold value (f).
8. The method as recited in at least one of the Claims 1 through 7, wherein the first and/or the third electrical control signal(s) acts/act on the heating source in such a manner that the oven chamber temperature is maintained substantially constant at a second predefined value for at least a second predetermined period of time.